Train to be a Scientist: DNA Extraction from Banana in your Kitchen

Ingredients (all can be purchased at a supermarket)**:**

½ cup water
¼ teaspoon uniodized salt
1 teaspoon baking soda
1 teaspoon shampoo (without conditioner)
2 teaspoons 91% isopropyl alcohol (must be well-chilled)
kitchen knife and fork
cutting board
coffee mug
1 banana
paper coffee filter
2 small containers with tight fitting caps (such as baby food jars)
toothpick

Procedure:

1. Make a "DNA Extraction Solution" by mixing the water, shampoo, salt, and baking soda in the coffee mug. Mix well until all ingredients are dissolved.
2. Peel the banana and cut off about ½ inch slice. Using the knife and fork mash it onto the cutting board until it is a gooey paste.
3. Measure about 1 level tsp of the mashed banana into one of the small jars and add 3 tsp of the DNA Extraction Solution prepared in step 1.
4. Cap the jar tightly and shake it vigorously for two minutes.
5. Wet the coffee filter and place it (in a cone shape) into a small clean jar.
6. Pour the banana/extraction solution mixture from the first jar, through the coffee filter. Keep the liquid that flows through the filter and discard the coffee filter with the banana debris.
7. Add an equal volume of cold isopropanol (3 tsp), cap the jar and gently swirl the solution. Long strands of DNA should appear. It looks cloudy-white and will be stuck with tiny air bubbles. Note: isopropanol should be used in a well-ventilated area.
8. Spool the DNA onto a toothpick by slowly swirling it in the solution. Lift it out and touch it. The DNA is the slimy mass.
9. Eat the leftover banana.